# DEPT. OF GEOGRAPHY

Name: _____ _____

Environmental Geology Final Exam, Geog 115 Fall 2004            Dr. John F. Looney, Jr.

1.      Renewable: non-renewable as _____: petroleum.
        a. tide            b. wave        c. coal        d. nuclear        e. both a & b

2.      Soft: hard as _____: anthracite.
        a. bituminous            b. coke            c. lignite            d. brown        e. both c & d

3.      _____:straturation as vadose: aeration.
        a. Aquifer        b. Hydrologic    c. Phreatic            d. Hydrothermal e. none of these

4.      Bacteria: Coliform as _____: particle.
        a. TDS        b. Mg        c. Cl                    d.Ca                e. none of these

5.      _____: Chemical as abrasion: hydrolysis.
        a. acid        b. mechanical    c . Disintegration        d.decomposition            e. both c & d

6.      A: B as leached area: _____.
        a. soluble material        b. accumulation c. deposition        d. all of them        e. none of these

7.      Oxisol: Laterite as _____:arisdosal.
        a. caliche        b. Entisol    c. histosol    d. spodisol        e. Mollesol

8.      Pedalfer: Acid: east as pedocal: base: _____.
        a. North b. South        c. West            d. Southeast        e. Northeast

9.      Permeable:  impermeable as sand/gravel: _____.
        a. pebbles        b. cobbles    c. clay                d. boulders        e.both c & d

10.     Mineral: ore as diamond:_____ .
        a. precious        b. rock    c galena            d. hematite        e. kimberlite

11.     The U.S. consumes 15% of molybdenum reserves and produces 50% of the supply.
        a. TRUE___                    b. FALSE___

12.     Evaporates form gypsum and halite.
        a. TRUE___                    b. FALSE___

13.     Placers are large course particles mined in the sea bed floor.
        a. TRUE___                    b. FALSE ___

14.     The U.S. with 6% of world population consumers I/6 of the world's resources.
        a. TRUE___                    b. FALSE ___

15.     The following may be recycled: Al, CR, Co, Cu, Au. No.
        a. TRUE___                    b. FALSE___

MATCH

| | | |
|---|---|---|
| 16. | _____lead | a. smelting toxics |
| 17 | _____copper | b. nodules |
| 18. | _____manganese | c. substitution for metal |
| 19. | _____ arsenic | d. natural gas |
| 20. | _____titanium | e. strategic reserve |
| 21. | _____methane | |
| 22. | _____petroleum | |
| 23. | _____mercury | |
| 24. | _____butane | |
| 25. | _____plastic | |

26.     Fossil fuels contain hydrogen and oxygen.
         a. TRUE_____b. FALSE____

27.     Cracking process separates petroleum.
         a. TRUE_____b. FALSE____

28.     Many different geological structures contain hydrocarbon deposits of fossil fuels.
         a. TRUE_____b. FALSE____

29.     Slightly less than 40% of U.S oil supplies are produced in the U.S.
         a. TRUE____                              b. FALSE ___

30.     Geopressurized deep gas zones are enhanced by hot brine injections.
         a. TRUE_____b. FALSE____

31.     There are more than 10,000 oil spills each year resulting in 15-25 million gallons lost.
         a. TRUE___                               b. FALSE____

| | | | |
|---|---|---|---|
| 32. | anthracite | a. | soft |
| 33. | coke | b. | hard |
| 34. | lignite | c. | manufactured |
| 35. | bituminous | d. | brown |
| 36. | peat | e. | unconsolidated |

37.     Fusion nuclear plants utilize _____ ____.
         a. deuterium      b. tritium      c. uranium          d. both a & b          e. none of these

38.     A problem of nuclear power generation is _____.
         a. radioactivity   b. meltdown c. fuel handling      d. waste disposal          e. all of those

39.     Geothermal power works well in _____.
         a. Lardarello, Italy        b. Russia        c. Japan          d. Greenland      e. all of them

40.     Biomass power generation may produce_____.
         a. alcohol        b. trees c. coal        d. petroleum          e. natural gas

41.     Hawaii utilizes solar and geothermal power.
         a. TRUE____                              b. FALSE ___

42.     Biomass fuel may utilize manure
         a. TRUE_____b. FALSE ___

43.     Electrical power usually is transported less than 300 miles.
         a. TRUE____                              b. FALSE ___

44. Gasohol is usually 10% methane.
    a. TRUE____                          b. FALSE____

45. Americans generate about 4 lbs/day of waste.
    a. TRUE____                          b. FALSE____

46. The largest source of industrial waste is _____.
    a. animal      b. chemical c. paper      d. crops e. minerals

47. The common waste disposal site in Massachusetts_____.
    a. sanitary landfill      b. open dump   c. incineration          d. off shore dump        e. none of these

48. The country with the largest garbage to energy conversion rate is _____.
    a. US    b. France      c. Sweden          d. Switzerland          e. Japan

49. In a sanitary landfill you _____and _____.
    a. burn/bury            b. compost/cover        c. leach/run off  d. recycle/ reuse
    e. none of them

50. A good economic reason to recycle is that_____.
    a. product is cheaper
    b. product degrades quickly
    c. deposits on cans and bottles
    d. paper is in short supply
    e. none of them

MATCH

51. ____Soda bottles                      a. polyethylene
52. ____Parking                            b. high density polyethylene
53. ____Salad bottles                      c. low density polyethylene
54. ____Milk bottles                       d. polypropylene
55. ____Motor oil containers               e. polystyrene
56. ____Detergent bottles
57. ____Prescription bottles
58. ____Foam cups
59. ____Shopping bags
60. ____Cereal boxes

61. For non municipal waste plants the preferred treatment in Massachusetts is _____.
    a. sewage        b. cesspool c. swimming pool    d. septic tank          e. gas tank

62. Most secondary sewage treatment utilizes_____.
    a. screens        b. chemicals      c. filters d. both a & c    e. none of these

63. Massachusetts is one of the largest generators of radio active waste in the U.S.
    a. TRUE ____                          b. FALSE____

64. The U.S. Government selected Yucca Mountain as a nuclear waste site because_____.
    a.        arid climate
    b.        low population
    c.        low water table
    d.        geological stability
    e.        all of them

65. Radioactive materials with the shortest 1/2 life probability_____.
    a. U2 38          b.      Cl4 c. Ra222     d I 131          e. SR 90

66.     An important consideration in chemical contamination of water supplies is _____.
        a.      point source
        b.      non point source
        c.      permeability
        d.      resident time
        e.      none of them

MATCH

67.     ____Pesticide                           a. califaction
68.     ____Thermal pollution                   b. anaerobic
69.     ____Fungicide                           c. organic
70.     ____PCB                                 d. Eutrophication
71.     ____PVC                                 e. Negative human effect
72.     ____$H_2S$
73.     ____Methane
74.     ____Herbicide
75.     ____Noxious gas

76.     ___BOD                                  a. Califaction
77.     __Blue green algae                      b. Anaerobic
78.     ___Bloom                                c. Organic
79.     ___Teratogen                            d. Eutrophication
80.     ___Bog Formation                        e. Negative Human Effect

81.     Pesticides of restricted use in water are _____.
        a. copper sulfate       b. Rotenone     c. DDT          d. DDE          e. both a & b

82.     Program to minimize amount of pesticides used is _____.
        a. IBM          b. IPM      c. PCB          d. PVC          e. DDT

83.     The most common components of our air are_____.
        a. Nitrogen     b. oxygen   c. carbon dioxide   d. Iron         e. all but d

MATCH

84.     ____Oxides                              a. Ozone
85.     ____combustion products                 b. Carbon monoxide
86.     ____removed by rain from air            c. POM
87.     ____high temperature                    d. Nitrates
88.     ____smog                                e. Sulfur
89      ____absorbs ultraviolet rays
90.     ____may cause skin cancer
91.     ____activated by CFC's
92.     ____melanoma
93.     ____$O_3$
94.     ____deadly
95.     ____odorless
96.     ____displaces hemoglobin in blood
97.     ____urban industrial problem
98.     ____low quality coal
99.     ____acid rain
100.    ____scrubbers

101. Volatile organic compounds include_____.
    a.   hydrocarbons      b.   chemical solvents    c.   heavy metals    d.    UFFI
    e.    all except d

102. 500: 50 as _____: good.
    a. moderate      b. unhealthful          c. very unhealthful        d. both b & c    e. none of these

103. Methods of controlling air pollution include.
    a. filters b. scrubbers          c. catalytic converters        d. wet scrubbers        e. all of them

104. Riparian:  Prior appropriation as West:_____.
    a. North b. South          c. West        d. Northeast      e. Southeast

105. According to the Rule of capture anything you can get is yours.
    a. TRUE_____                              b. FALSE_____

106. According to the Rule of Reasonable use you can return polluted water to streams.
    a. TRUE_____                              b. FALSE_____

107. The oldest US law concerning water pollution is _____.
    a. Riverways Act          b. Municipal Sewage Act          c. Clear Water Act
    d. Water Quality Improvement Act              e. EPA Act

108. According to CRAMRA we can mine in the Arctic.
    a. TRUE_____                              b. FALSE_____

109. _____Love Canal                           a. Superfund
110. _____geological hazards                   b. Field ACT
111. _____zero flocculants                     c. MDS
112. _____Environmental Policy                 d. EIS
113. _____Cost Benefit                         e. FFIP
114. _____Toxic waste site
115. _____Rivers
116. _____pollution exclusion
117. _____coasts
118. _____footing
119. _____marine dumping
120. _____soils

121. Manganese in smoke and aerosols may cause nerve and brain damage.
    a. _____TRUE            b. _____FALSE

122. Locoweed is to cattle and may cause hair loss or depression is rich in the chemical selenium.
    a. _____TRUE            b. _____FALSE

123. Selenium is taken up by the root system of plants like wheat, cabbage and onions.
    a. _____TRUE            b. _____FALSE

124. Radon is commonly found in _____.
    a. Fe          b.$UO^2$          c. granite          d. limestone          e. both a & b

125. Humans living in coastal communities have higher rates of heart disease because of _____.
    a. Fe          b. $UO_2$          c. Na          d. Mn              e all but c

Certain chemicals in environments impact human physiology.

| | | | |
|---|---|---|---|
| 126. | teeth | a. zinc |
| 127. | growth | b. chromium |
| 128. | insulin | c. Iodine |
| 129. | glucose tolerance | d. lead |
| 130. | bone strength | e. Fluorine |
| 131. | healing | |
| 132. | infertility | |
| 133. | poisoning | |
| 134. | reproduction | |
| 135. | thyroid problems | |

136. Of the 8639 dams in the U.S., the Corps of Engineers says that approximately one third of are unsafe.
a._____TRUE          b. ____FALSE

137. An Olympic site in France recently that was the site of a poorly engineered dam was the _____.
a. La Salle          b. Seine          c. La Rance          d. Voiante          e. Lido

138. As a site planner to gain the best possible value from a dam site, I would consider_____
a. hydro power   b. irrigation       c. flood control   d. both a & b      e. all of them

139. A good environmental planner would probably use often all of the following maps except_____
a. topographical          b. geological       c. political          d. zoning          e. flood plain

140. Point source pollution is easier to define than non-point source pollution.
a. _____TRUE          b. _____FALSE

141. The Field Act is important in re-establishing inner city brown fields.
a. _____TRUE          b._____FALSE

142. A dam that holds base water, generates power, provides irrigation is described as segmental use function.
a. _____TRUE          b. _____FALSE

143. In the US for planning purposes land value is described as the highest and best possible use.
a. _____TRUE          b. _____FALSE

144. Pesticides can combine and react with mud.
a. _____TRUE          b._____FALSE

145. Zoning, as we know it, is less than 100 years old in US practices.
a. _____TRUE          b. _____FALSE

146. The Federal Government may legally allow mining a Natural Park Land.
a. _____TRUE          b. _____FALSE

147. There is a natural conformity on water rights and law in the US.
a. _____TRUE          b. _____FALSE

148. A pond with pH 4.2 could be sterile.
a. _____TRUE          b._____FALSE

149. Temperature inversion contributes to smog impacts on humans.
a. _____TRUE          b. _____FALSE

150. The movement of POM's is dependant upon size and amount of rain.
a. _____TRUE          b. _____FALSE

## Have a nice Vacation!